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PSYCHOMETRIC PROPERTIES OF TEN ITEM PERSONALITY IVENTORY (TIPI)

Sonia Brito-Costa
Universidade de Aveiro, sonya.b.costa@gmail.com
Ana Moisão
Universidade de Aveiro, ana.karina.teodosio@gmail.com
Hugo De Almeida
ISCA-Universidade de Aveiro, hugodealmeida@ua.pt
Florencio Vicente Castro
Universidade da Extremadura, fvicentec@gmail.com

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ABSTRACT

This study based on the Five Factor Model of Costa and McCrae (1987) sought to determine the internal consistency and the psychometric properties of the Ten Item Personality Inventory (TIPI) of Gosling, Rentfrow, & Swann (2003), Lima and Castro (2009) Portuguese version. The sample consisted of 170 male soccer athletes whose average age stood at 18.50 years, with a minimum of 13 and a maximum of 33 years. Statistical analysis was performed by the Statistical *Software Package for the Social Sciences* (SPSS) in its 19 version for Windows. The TIPI showed low internal consistency (=0.462) and factor analysis that meets the criteria postulated by the instrument authors, so considered it valid to evaluate the personality rapidly in samples with little time available, for example elite athletes.

Keywords: Personality, Validation, Tem Item Personality

INTRODUCTION:

The personality has been defined as a set of psychological qualities that contribute to distinct patterns of an individual feel, think and behave (Cervone & Pervin, 2010). Some researchs appoint the possibility of personality predicting sporting success (Allen, Greenlees, Lain, & Jones, 2011; Egloff & Gruhn, 1996; Gee, Marshall, & King, 2010; Morgan & Johnson, 1978; Morgan, O'Connor, Ellickson, & Bradley, 1988; Piedmont, Hill, & Blanco, 1999; Rhea & Martin, 2010; Sheard & Golby, 2010, however, reveal that there is no consistent pattern between dimensions of personality and athletic performance, as this relationship appears to be inconsistent.

On the other hand, the sports performance is a complex and dynamic process in which, for example, a single moment of bad luck, a bad decision athlete or an unexpected event may change

the result of a competition dramatically. Thus, any attempt to link personality with the global athletic performance, may be considered a somewhat unrealistic effort (Aidman & Schofield, 2004; Vealey, 2002). Some authors suggest that research should not focus on the effects of personality on the results, particularly in sports performance (Ozer & Benet-Martinez, 2006; Poropat, 2009) occurrence of adverse situations and external factors that can influence.

As regards the assessment of personality, Gosling, Rentfrow, & Swann (2003), developed the Ten Iten Personality Inventory (TIPI), adapted to Portugal by Lima and Castro (2009). This is a brief self-report measure and consists of 10 items to assess the personality based on the Big Five Factors Model of Costa and McCrae (1987). This model is substantially descriptive, hierarchical and emphasizing the taxonomic aspect, that is, it claims that the personality is divided into a smaller number of key buildings and that each factor be taken into account in its structure, classified in five characteristic factors: extraversion, agreeableness , emotional stability, conscientiousness and openness to experience (Costa & McCrae, 1987; Grant & Langan-Fox, 2006; Gosling, Rentfrow, & Swann, 2003; Macdonald, Bore, & Munro, 2008; Pervin & John 1997; Rovik et al, 2007). To assess personality profiles, some authors (Allik, Laidra, Realo, & Pullman., 2004; McCrae et al, 2002) show that the use of self-report measures for young people, can provide structurally valid results in five major factors personality, but empirically related to low levels of emotional stability and conscientiousness, which will be changing depending on the constructions performing ranging in their growth and in their experiences. Other studies (Buchanan & Smith, 1999; Gosling, Potter, Christopher, & Oliver, 2008; McGraw, Tew, & Williams, 2000; Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002; Skitka & Sargis, 2006) reveal that the assessment of personality profiles detects more differences between between 10 and 14 years than in later ages, showing similar results in adolescents, young adults and adults, reiterating that the late childhood and early adolescence are critical periods for the development of analytical skills on one's own personality.

Faced with the real possibility of personality predict the behavior, evaluate the personality rapidly in samples with little time available, for example elite athletes (Allen et al , 2011; Egloff & Gruhn, 1996; Gee, Marshall, & King, 2010; Morgan & Johnson, 1978), managing to have access to their personality profile becomes essential.

In this sense, the objective of this work is to verify the psychometric properties and validate the Ten Item Personality Inventory (TIPI) Gosling, Rentfrow, & Swann (2003), Portuguese version.

2. METHODS:

2.1. Participants:

The sample consisted on 170 athletes from football mode, volunteers, whose average age stood at 18.50 years, with a minimum of 13 and a maximum of 33 years. All participants were male and belonged to three clubs from central and northern regions of the country designated as clubs A, T and P, and 88.2% of the sample was integrated in the main divisions of the national championship of the respective mode (Club A and P) and 11.8% fell within a competitive level with the name given by the Portuguese Football Federation as 2nd National Division Center (Club T). To level the playing position, 18 subjects (10.6%) occupied the goalkeeper position; 28 subjects (16.5%) were central defense; 26 subjects (15.3%) were side defense; 46 subjects (27.1%) were central midfielder; 30 subjects (17.6%) were high ward and 22 individuals (12.9%) were the spearhead.

As noted in **Table 1**, belonged to the club (A) the levels U-15, U-16, U-17, U-19 and Senior; the club (P) echelons Under-16, Under-17 and Under-19, and the club (T) the senior level. As regards the competitive level, 8.8% of the total sample belonging to the Sub-step 15; 20.6% level U16; 20.0% Under 17 level; 23.5% level Sub 19 and 27.1% ranking senior. With regard to senior level,

15.3% belonged to the main division of the national league and 11.8% were related to the second division. Inside the club, we found that all the club athletes (T) was the 2nd senior division in the Club (P) was 37.7% youth (U-17) and 35.8% Youth (U16). Club (A), 26.8% were senior 1st division, with the same percentage of the sample of the players of this club, junior (U-19).

Table 1: Distribution of earners by club

	Clube							
	A		**T**		**P**		**Total**	
Ranking Club	N	%	N	%	N	%	N	%
Started (sub15)	15	15,5%	0	0,0%	0	0,0%	15	8,8%
Youth (sub16)	16	16,5%	0	0,0%	19	35,8%	35	20,6%
Youth (sub17)	14	14,4%	0	0,0%	20	37,7%	34	20,0%
Junior (sub19)	26	26,8%	0	0,0%	14	26,4%	40	23,5%
Senior 2 League	0	0,0%	20	100,0%	0	0,0%	20	11,8%
Senior 1 League	26	26,8%	0	0,0%	0	0,0%	26	15,3%
Total	97	100,0%	20	100,0%	53	100,0%	170	100,0%

Table 2: Cronbach's alpha of TIPI Scale

Cronbach's* Alpha *(Total)	***0,462***

	Average Scale if deleted item	**Variance Range if item is deleted**	***Cronbach's* Alpha if item Eliminated**
Extraversion	21,2959	6,174	0,462
Affability	20,5710	7,947	0,443
Conscientiousness	20,6183	6,566	0,332
Emotional stability	21,8314	7,393	0,464
Opening to new Experiences	20,9852	6,757	0,327

Table 3: Correlation Matrix Inter-Items of TIPI Scale

	Extraversion	Affability	Conscientiousness	Emotional Stability	Opening to new Experiences
Extraversion		-0,005	0,190	-0,050	0,368
Affability	-0,005		0,195	0,204	0,069
Conscientiousness	0,190	0,195		0,204	0,247
Emotional Stability	-0,050	0,204	0,204		0,118
Opening to new Experiences	0,368	0,069	0,247	0,118	

Table 4: Factorial Analysis: KMO and Bartlett test of sphericity

KMO		0,591
Sphericity test Bartlett Chi-square Approximate		198,684
	Gl	45
	P	0,000

The commonalities (**Table 5**) shown that, except rTIPI2 item, the remaining explain, at least half of the variance of the original variables (> 0.5). For the analysis of Eigenvalues and the discretion of the root Latent (p> 1.0), verified the existence of four factors representing about 60% of the total variance (**Table 6**). In order to understand which variables are associated with each factor, we opted for the use of rotation Varimax with Kaiser Normalization. Analyzing the factorial loads of each item (**Table 7**), we can distribute the items rTIPI6 and rTIPI10 in component 1, rTIPI4 items, rTIPI2 and TIPI9 in component 2, items TIPI5, TIPI1 and TIPI3 in component 3, and items rTIPI8 and TIPI7, in the component 4.

Table 5: Factorial analysis commonalities – TIPI

	Inicial	**Extraction**
TIPI1	1,000	,625
rTIPI2	1,000	,404
TIPI3	1,000	,654
rTIPI4	1,000	,611
TIPI5	1,000	,532
rTIPI6	1,000	,675
TIPI7	1,000	,543
rTIPI8	1,000	,791
TIPI9	1,000	,701
rTIPI10	1,000	,541

Table 6: Factorial Analysis: Total Variance Explained – TIPI

Components	**Initial Eigenvalues**			**Extraction** of Sum of Squares of Loads			**Rotation** of Sum of Squares of Loads		
	Total	**% da Variance**	**% Cumulative**	**Total**	**% da Variance**	**% Cumulative**	**Total**	**% da Variance**	**% Cumulative**
1	2,140	21,397	21,397	2,140	21,397	21,397	1,681	16,814	16,814
2	1,552	15,521	36,918	1,552	15,521	36,918	1,504	15,041	31,855
3	1,340	13,397	50,315	1,340	13,397	50,315	1,504	15,036	46,891
4	1,045	10,449	60,764	1,045	10,449	60,764	1,387	13,873	60,764
5	,853	8,528	69,292						
6	,840	8,397	77,688						
7	,688	6,885	84,573						
8	,632	6,316	90,890						
9	,479	4,790	95,680						
10	,432	4,320	100,000						

Table 7: Factorial Analysis: Rotation Matrix (a) – TIPI

	Components			
	1	2	3	4
rTIPI6	0,788	0,013	0,219	-0,080
rTIPI10	0,674	0,172	0,067	0,229
rTIPI4	0,333	0,692	-0,142	-0,043
rTIPI2	-0,002	0,627	-0,086	-0,058
TIPI9	-0,411	0,604	0,360	0,195
TIPI5	0,102	-0,085	0,717	-0,015
TIPI1	0,463	-0,255	0,587	0,025
TIPI3	0,100	0,391	0,559	0,422
rTIPI8	0,260	0,029	-0,193	0,828
TIPI7	-0,154	-0,115	0,291	0,649

- Extraction method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; (a) Rotation converged in 21 interactions.

DISCUSSIONS AND CONCLUSIONS

The TIPI showed low internal consistency (= 0.462), and a factor analysis that meets the criteria postulated by the authors instrument, that explain it is expected to obtain low rates alpha in the TIPI, with only two items by size, using the same in the positive and negative poles, and a factor analysis that does not divide the items according to the original separation of these (Gosling, Rentfrow, & Swann, 2003).

Despite the weak internal consistency and low rates of confirmatory factor analysis, the TIPI is considered a valid and useful tool for investigations where time is limited, and overall personality measurement, based on the five major factors of personality (Denissen, Geenen, Selfhout, &Van-Aken, 2008; Garaigordobil & Bernaras, 2009; Kenny, 2004; Muck, Hell, & Gosling, 2007; Rammstedt & John, 2007; Smits & Boeck, 2006; Woods & Hampson, 2005) that which is proved with the various translations, and existing validations.

Our sample show that the use of self-report measures for young people can provide structurally valid results in five major factors personality, however empirically related to low levels of emotional stability and conscientiousness, which will be changing depending on the constructions performing ranging in their growth and in their experiences going against postulated by various authors (Allik, Laidra, Realo, & Pullman, 2004; Buchanan & Smith, 1999; Gosling, Potter, Christopher, & Oliver, 2008; McCrae et al, 2002; McGraw,Tew, & Williams, 2000; Robins,Trzesniewski, Tracy, Gosling, & Potter, 2002; Skitka & Sargis, 2006).

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